Quality Improvement in Cancer Screening: Highlighting Breast and Colorectal Cancer

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Overview

Editor’s Note:
This is the first of a 2-part series focused on quality improvement in cancer screening. The first part highlights screening specific to breast and colon cancer. The second part will review some theories of health behavior that can be applied to motivate patients to adopt regular screening behavior and will emphasize risk assessment, decision support for patients, and enhancement of communication between clinicians and patients.

Cancer screening is a high priority clinical preventive service, particularly with the aging of the American population and the higher and increasing incidence of cancer in patients aged 50 years and older. Furthermore, early detection increases the probability of cure and options for less invasive treatment methods, eg, lumpectomy for breast cancer and polypectomy for colorectal cancer.

Clinical trials, epidemiologic research, and advances in technology are constantly expanding the evidence-base for national screening recommendations. Although this leads to continual changes in guidelines for cancer screening, current access to the Internet simplifies the process of staying up-to-date with such recommendations and their scientific bases. National authorities are increasingly working together to achieve a common consensus on recommendations for cancer screening of asymptomatic, average risk patients, to avoid confusion by the public and physicians alike. Web links to the cancer screening recommendations of national authorities such as the United States Preventive Services Task Force (AHRQ), the Community Guide for Preventive Services (CDC), the American Cancer Society (ACS) and primary care specialty societies can be found in the Resource listing at the end of this column.

Translating Knowledge into High Screening Rates

Although being knowledgeable about the current national standards for cancer screening practices is the first step, translating that knowledge into high screening rates among eligible patients is facilitated by the establishment of systems that help assure that the performance and/or referral for cancer screening is routinely followed. This can be accomplished through approaches such as use of patient and/or provider reminders and staff involvement.

Lack of physician recommendation has been the most common barrier cited by patients for not having breast or colorectal cancer screening -- and clinicians have reported this is often due to not remembering to recommend screening(s) during busy, time-constrained practice hours. Tracking the patient's follow-up of cancer screening recommendations or referrals (eg, return of fecal occult blood test kits, receipt of a mammography report) is essential, as is follow-up of abnormal screening findings. To facilitate your systematic performance of screening and follow-up, an Internet-accessible resource for designing and applying office systems is provided by the AHRQ. This helpful guide, titled "Step by Step Guide to Clinical Preventive Services" is included in the Resource list.

Providing a "patient navigator," particularly to facilitate scheduling and follow-up of cancer screening among the disadvantaged, has also been found to improve screening completion
nurses and other staff in accomplishing objectives for cancer screening can both facilitate the achievement of increased screening rates and improve morale and job satisfaction.

This involvement can run the gamut from nursing staff providing patient education and counseling about cancer screening, to distribution of patient surveys to waiting patients by reception staff (e.g., regarding when their last cancer screening tests were obtained). Electronic medical records can facilitate the generation of patient and provider reminders; tracking for the completion of screening; and comparison of cancer screening rates over time among age/gender eligible patients to monitor progress in the achievement of cancer screening objectives for a practice setting.

Lack of health insurance coverage can also be a barrier to both screening and follow-up. This can be a particular problem for those aged 50-64 years who are not yet entitled to Medicare screening coverage. Some states and localities provide financial assistance and/or clinical services through CDC funding, e.g., breast and cervical cancer program and (more geographically limited) colorectal cancer demonstration programs, or through state and local health department funding. Identify these resources in your community by checking with the local health department or ACS and make this information known to your low-income patients, as well as to staff. Use of programs such as these can help to avoid disparities in completed screening rates.

Breast Cancer Screening

Mammography remains the mainstay for breast cancer screening and technological advances have facilitated the prompt follow-up of abnormal mammogram findings by radiologists using breast ultrasound or (less frequently) MRI, and when indicated, less invasive ultrasound-guided or stereotactic-guided percutaneous biopsy techniques. The availability and continued development of digital mammography improves the ability to transfer or obtain high quality images from prior mammograms performed at other facilities. Digital mammography has recently been found to be more effective than film screen mammography for detecting breast cancer in women younger than age 50, women with radiologically dense breasts, and pre- or perimenopausal women.

Because clinical breast examination (CBE) has not, and for the foreseeable future, will not be tested in a randomized clinical trial as an independent screening modality for breast cancer, the USPSTF does not recommend for or against its routine use for breast cancer screening alone or in combination with mammography. Nevertheless, CBE is an expected part of routine physical examination, is widely performed, is still recommended by many authorities for breast cancer screening (e.g., ACS), and currently identifies approximately 5% of cancers missed by mammography.

Failure to obtain a biopsy specimen from a breast mass that is palpable in the presence of a normal mammogram is a very common cause of malpractice litigation. Standardization of the technique and reporting of CBE would be of value for the recognition and follow-up of suspicious breast masses and in assessing the contribution of CBE to breast cancer detection. The need for standardization recently was addressed by the ACS, which assembled a representative task force to improve the quality of CBE. Saslow and colleagues described a best practice approach to clinical breast examination and reporting - - this is available online (see Resources).

Colorectal Cancer Screening

There has been a temporal trend toward increased mammography screening rates among women, however, colorectal cancer (CRC) screening rates are still relatively low (30%-40%) and are comparable to what mammography rates were 20 years ago. Although good evidence-based screening technologies are available for CRC screening, decision-making is complicated by the availability of more than 1 recommended option for screening of individuals aged 50 years and
annually, and/or sigmoidoscopy every 5 years, or colonoscopy every 10 years, or double
counter barium enema every 5-10 years.

Among current concepts in cancer screening is patient involvement in informed or shared
decision-making. Such involvement recognizes patient values as a component of personal
choices about screening to promote motivation and greater satisfaction with cancer
screening. Cultural factors may influence patient values. Socioeconomic factors also play a
role in the accessibility of screening and can result in screening disparities, ie, decreased
recommendations for and utilization of colonoscopy among the uninsured. Cultural barriers
among some low-income groups to performing FOBT could make colonoscopy every 10 years
(as opposed to FOBT annually) more advisable from an adherence perspective.

Pitfalls in colorectal cancer screening revealed in the current literature include continued use of
digital rectal examination (DRE) with a single stool guaiac test alone as a screening method. A
recent study has demonstrated that DRE with a single FOBT alone is not "better than nothing"
as commonly believed. A negative result can lead to a false sense of security regarding the
absence of CRC and it is strongly recommended that the common practice of an in-office FOBT
be abandoned.

Other areas of concern for CRC screening quality improvement are reports of follow-up of a
positive FOBT result with a repeat FOBT when colonoscopy is the next appropriate step.
Because bleeding can be intermittent, positive FOBTs should be directly followed by
colonoscopy for examination of the entire colon. Finding hemorrhoids does not exclude the
possibility of a colon cancer, particularly if the patient has not seen bright red blood. Also, those
who perform sigmoidoscopy for cancer screening should only undertake this responsibility if they
are prepared and sufficiently skilled to perform biopsies in the event of abnormal findings.
Otherwise, patients are potentially subjected to the added risk and expense of a second
endoscopy procedure.

Because of the relatively slow rate of growth of colorectal cancers, and evidence from the
literature, the current recommended interval for repeat colonoscopy is every 10 years.
Scheduling asymptomatic, average risk patients aged 50 years and older for repeat screening at
shorter intervals for colonoscopy should be justified. The movement to develop standards for the
practice of colonoscopy may reduce the current trend of shortened intervals that are due to
endoscopist uncertainty. Fecal immunochemical testing (FIT) for occult blood is accepted by
several authorities (eg, ACS, CDC) in colorectal cancer screening as an option among the
various stool tests, and one that seems to be more patient friendly. Another helpful Web site
for information about colorectal cancer is the National Colorectal Cancer Roundtable, organized
by ACS and CDC (see Resources). The CDC has also developed excellent fact sheets for
patients and health professionals about colorectal cancer screening as a part of its Screen for
Life campaign, which are available online (see Resources).

In conclusion, to meet the growing need for cancer screening, you can readily gain access to the
most recent national screening guidelines; adopt a systematic approach to performing screening
at recommended intervals; track patient follow-up of your recommendations/referrals as well as
positive screening findings; and improve the quality of your screening test performance and
avoid outmoded or ill-advised cancer screening practices. Part 2 of this series emphasizes
improving the effectiveness of your communication with patients about cancer screening to
motivate their adoption of appropriate cancer screening behaviors; promote their accurate
assessment of cancer risk; and provide them with decision support so they can participate in
shared or informed decision-making to increase appropriate use of and satisfaction with cancer
screening.

Resources

United States Preventive Services Task Force (USPSTF)
http://www.ahrq.gov/clinic/cps3dix.htm#cancer
References


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